Virtual Housekeeping

- Roll call; type your name in the chat
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- If time runs short, remaining questions can be emailed greta.dige@mt.gov

Thank you and enjoy!

Environmental Assessments

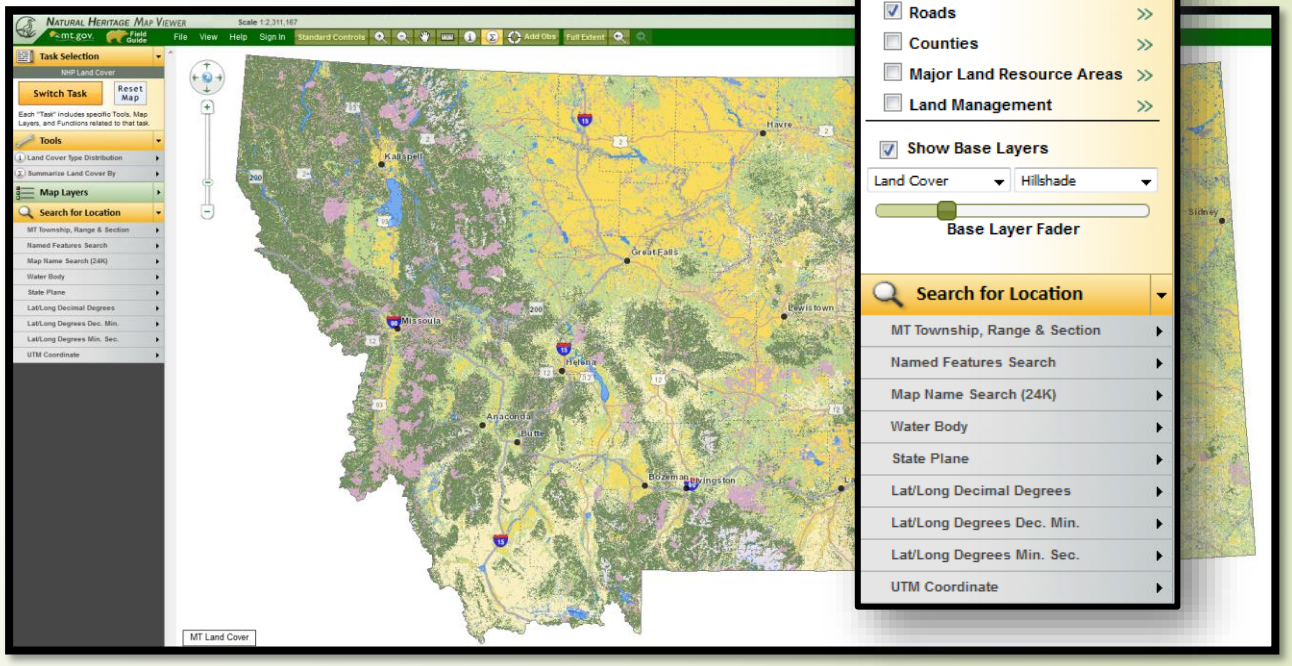
MNHP Environmental Summary Tool

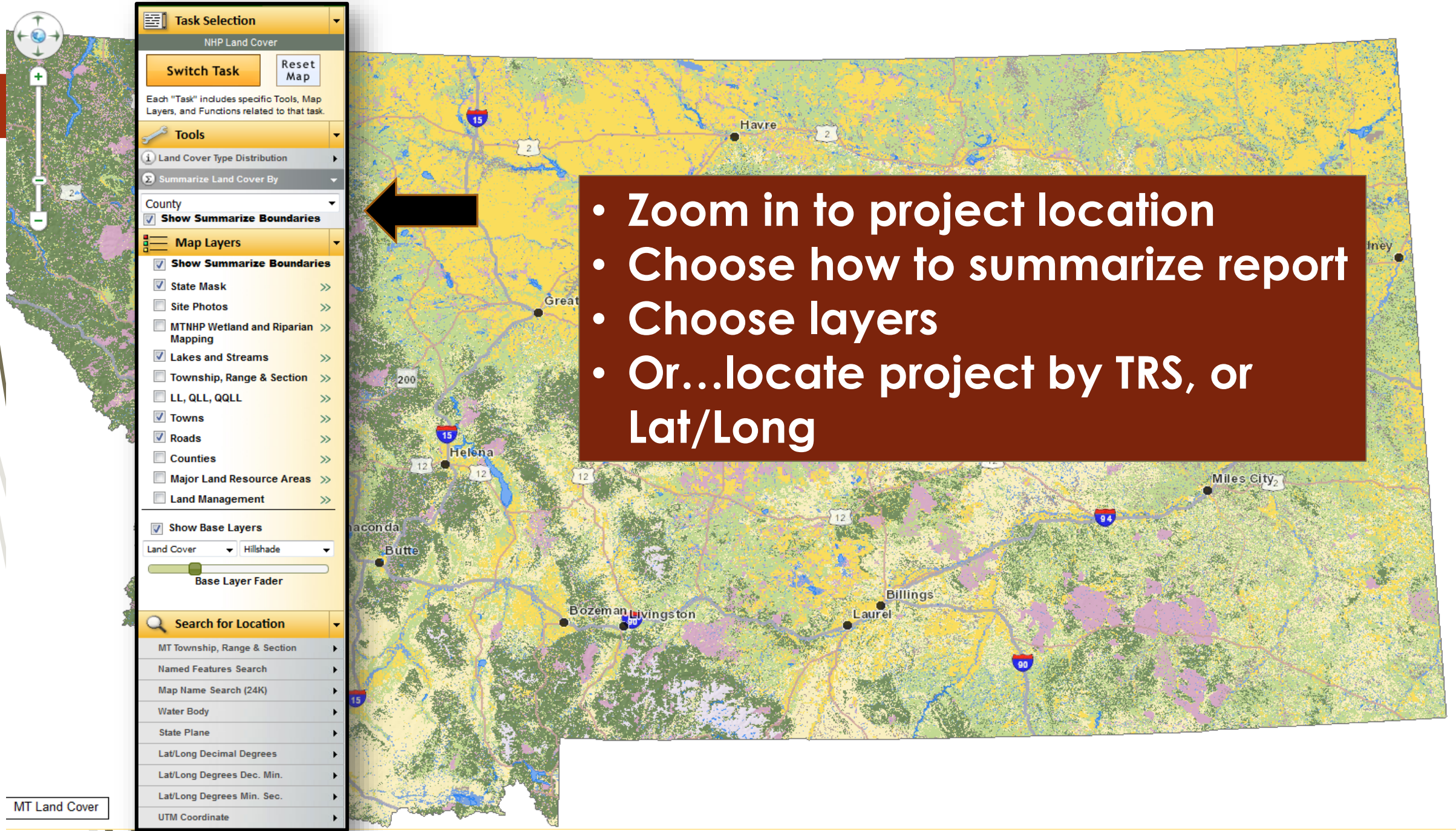
&

Environmental Assessment Forms

Environmental Summary Report

mtnhp.org





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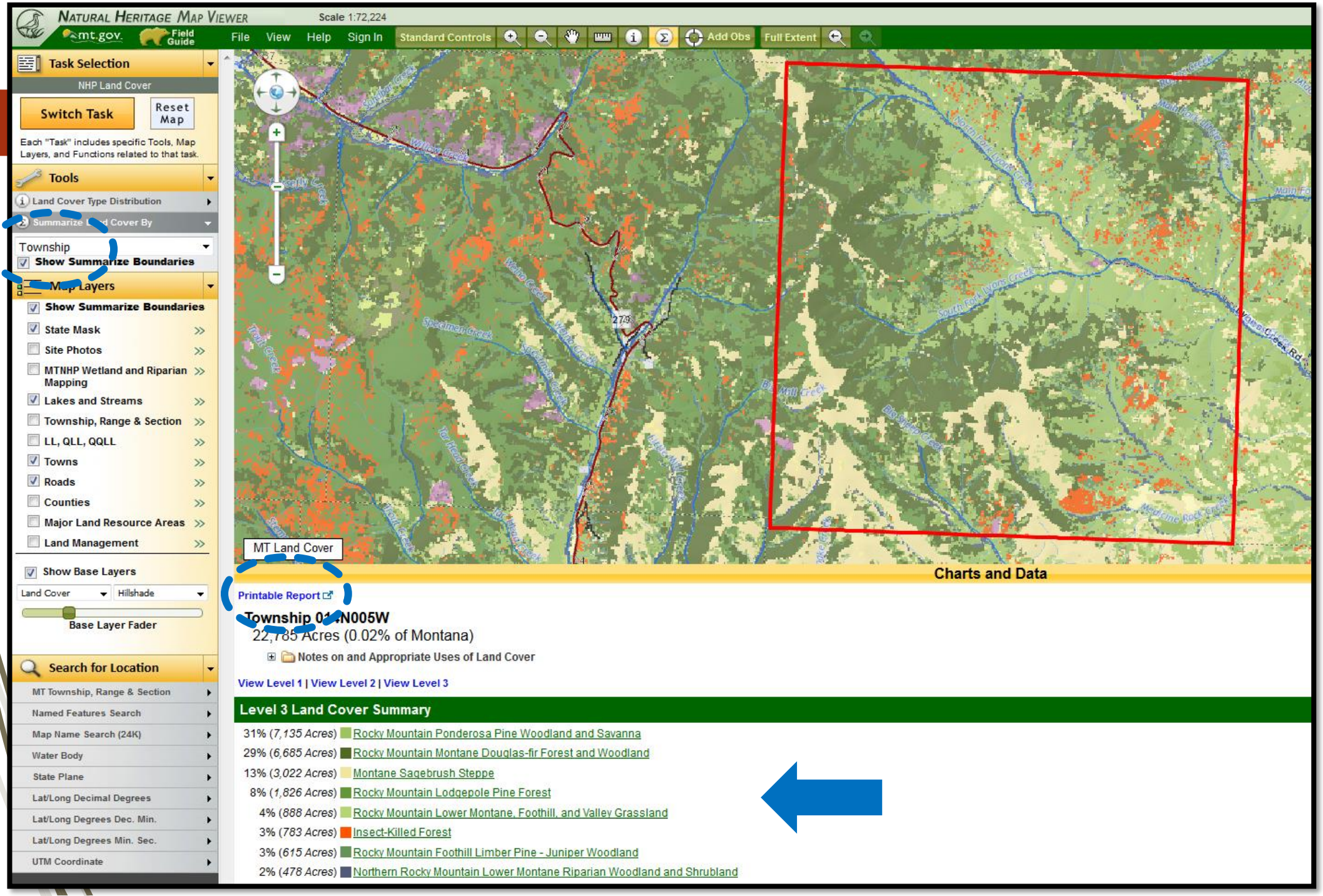
Natural Heritage Map Viewer
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Tools
Land Cover Type Distribution
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Show Summarize Boundaries
Map Layers
Show Summarize Boundaries
State Mask
Site Photos
MTNHP Wetland and Riparian Mapping
Lakes and Streams
Township, Range & Section
LL, QLL, QQLL
Towns
Roads
Counties
Major Land Resource Areas
Land Management
Show Base Layers
Land Cover
Hillshade
Base Layer Fader
Search for Location
MT Township, Range & Section
Named Features Search
Map Name Search (24K)
Water Body
State Plane
Lat/Long Decimal Degrees
Lat/Long Degrees Dec. Min.
Lat/Long Degrees Min. Sec.
UTM Coordinate
MT Land Cover
Charts and Data
Printable Report
Township 01N005W
22,785 Acres (0.02% of Montana)
Notes on and Appropriate Uses of Land Cover
View Level 1 | View Level 2 | View Level 3
Level 3 Land Cover Summary
31% (7,135 Acres) Rocky Mountain Ponderosa Pine Woodland and Savanna
29% (6,685 Acres) Rocky Mountain Montane Douglas-fir Forest and Woodland
13% (3,022 Acres) Montane Sagebrush Steppe
8% (1,826 Acres) Rocky Mountain Lodgepole Pine Forest
4% (888 Acres) Rocky Mountain Lower Montane, Foothill, and Valley Grassland
3% (783 Acres) Insect-Killed Forest
3% (615 Acres) Rocky Mountain Foothill Limber Pine - Juniper Woodland
2% (478 Acres) Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland

Field Guide Home | Animals | Plants | Lichens | Ecological Systems | Invasives | Help

Montana Field Guides

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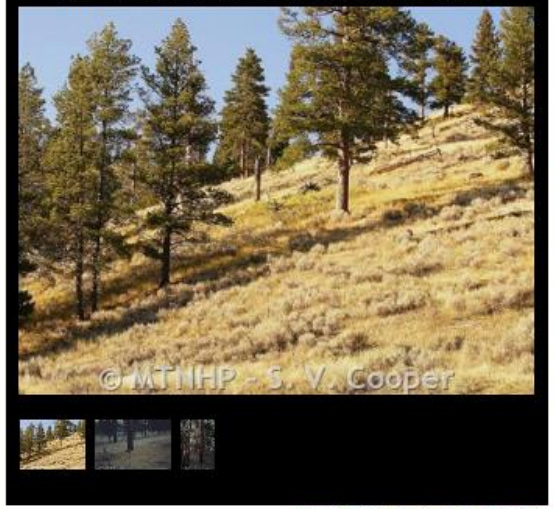
Ecological Systems
Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Ponderosa Pine Woodland and Savanna

Rocky Mountain Ponderosa Pine Woodland and Savanna



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General Description

This system occurs on warm, dry, exposed sites in the foothills of the Rocky Mountains in west-central and central Montana, at the ecotone between grasslands or shrublands and more mesic coniferous forests. Elevations range from 1,066 to 1,676 meters (3,500-5,500 feet), with higher elevation examples mostly confined to central Montana. Occurrences are found on all slopes and aspects; however, moderately steep to very steep slopes or ridgetops are most common. True savanna types are infrequent; the system is more characteristically an open forest with a grassy understory. In the western part of the state, this system is seen mostly on dry slopes in the rainshadow of the Bitterroot Mountains. East of the Continental Divide, it is most widespread around Helena and Lewistown, although it occurs throughout mountain ranges as far east as the Little Rocky and Bearpaw Mountains. Ponderosa pine (*Pinus ponderosa*) is the dominant conifer. Douglas-fir (*Pseudotsuga menziesii*) and western larch (*Larix occidentalis*) may be present in the tree canopy in the more western areas, but are usually absent. In central Montana, limber pine (*Pinus flexilis*) and horizontal juniper (*Juniperus horizontalis*) are frequently components. Although the understory of ponderosa pine forests is often shrubby in other states, in Montana, habitats are mostly dominated by graminoids, although bitterbrush (*Purshia tridentata*), white snowberry (*Symphoricarpos albus*), and skunkrush (*Rhus trilobata*) occur in forests on benchlands and rocky slopes in the central portion of the state. Understory vegetation is more typically grasses and forbs that resprout following low to moderate intensity surface fires. Prolonged drought, beetle kill and exotic invasion are rapidly changing the dynamics of this system.

Vegetation

Ponderosa pine is the dominant conifer. Douglas-fir and western larch may be present in the tree canopy in the more western areas, but are usually absent. In central Montana, limber pineand horizontal juniperare often components. Although the understory for ponderosa pine forests is often shrubby in other states, in Montana, habitats are mostly dominated by grasses, although antelope bitterbrush, snowberry, serviceberry (*Amelanchier alnifolia*), bearberry (*Arctostaphylos uva-ursi*), common juniper (*Juniperus communis*) and skunkbush occur in forests on benchlands and rocky slopes in the central portion of the state. Understory vegetation is more typically fire-resistant grasses and forbs that resprout following surface fires. High shrub cover, understory trees, and downed logs are uncommon. These more open stands support grasses such as bluebunch wheatgrass (*Pseudoroegneria spicata*), which is usually dominant, prairie junegrass (*Koeleria macrantha*) and needle and thread (*Hesperostipa comata*), as well as dryland sedges likethreadleaf sedge (*Carex filifolia*) and sun sedge (*Carex inops* ssp. *heliophila*). On more mesic sites,bluebunch wheatgrass occurs as the dominant graminoid species with Idaho fescue (*Festuca idahoensis*) and rough fescue (*Festuca campestris*). In central Montana, soapweed yucca (*Yucca glauca*), Pennsylvania sedge (*Carex pennsylvanica*), grama (*Bouteloua spp.*) and bluestem (*Andropogon spp.*) occur on especially dry sites. Common herbaceous forbs include yarrow (*Achillea millefolium*), pink pussytoes (*Antennaria rosea*), arrowleaf balsamroot (*Balsamorhiza sagittata*), Indian blanket flower (*Gaillardia aristata*), and silky lupine (*Lupinus sericeus*).

Species Associated with this Ecological System

- Details on Creation and Suggested Uses and Limitations
- Native Species Commonly Associated with this Ecological System
- Native Species Occasionally Associated with this Ecological System

Mammals

- Spotted Bat (*Euderma maculatum*) SOC
- Fisher (*Pekania pennanti*) SOC
- Wolverine (*Gulo gulo*) SOC
- Canada Lynx (*Lynx canadensis*) SOC
- Moose (*Alces americanus*)

Birds

- Great Gray Owl (*Strix nebulosa*) SOC
- Green-tailed Towhee (*Pipilo chlorurus*) SOC
- Short-eared Owl (*Asio flammeus*) PSOC
- Northern Harrier (*Circus hudsonius*)
- Killdeer (*Charadrius vociferus*)
- Rock Pigeon (*Columba livia*)
- Snowy Owl (*Bubo scandiacus*)
- Vaux's Swift (*Chaetura vauxi*)
- White-throated Swift (*Aeronautes saxatalis*)
- Eastern Kingbird (*Tyrannus tyrannus*)
- Bank Swallow (*Riparia riparia*)
- Barn Swallow (*Hirundo rustica*)
- Clay-colored Sparrow (*Spizella pallida*)
- Vesper Sparrow (*Pooecetes gramineus*)
- Lincoln's Sparrow (*Melospiza lincolnii*)
- White-crowned Sparrow (*Zonotrichia leucophrys*)
- Red-winged Blackbird (*Agelaius phoeniceus*)
- Western Meadowlark (*Sturnella neglecta*)
- Brewer's Blackbird (*Euphagus cyanocephalus*)
- Bullock's Oriole (*Icterus bullockii*)
- House Finch (*Haemorhous mexicanus*)
- American Goldfinch (*Spinus tristis*)

Reptiles

- Common Gartersnake (*Thamnophis sirtalis*)

Amphibians

- Western Tiger Salamander (*Ambystoma mavortium*)
- Boreal Chorus Frog (*Pseudacris maculata*)

Invertebrates

- Pale Swallowtail (*Papilio eurymedon*)
- Greenish Blue (*Plebejus saepiolus*)
- Field Crescent (*Phyciodes pulchella*)

Vascular Plants

- Spalding's Catchfly (*Silene spaldingii*) SOC

Primary Composition of Land Cover

31% (7,135 Acres)

Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Ponderosa Pine Woodland and Savanna

This system occurs on warm, dry, exposed sites in the foothills of the Rocky Mountains in west-central and central Montana, at the ecotone between grasslands or shrublands and more mesic very steep slopes or ridgetops are most common. True savanna types are infrequent; the system is more characteristically an open forest with a grassy understory. In the western part of th east as the Little Rocky and Bearpaw Mountains. Ponderosa pine (*Pinus ponderosa*) is the dominant conifer. Douglas-fir (*Pseudotsuga menziesii*) and western larch (*Larix occidentalis*) may be pine forests is often shrubby in other states, in Montana, habitats are mostly dominated by graminoids, although bitterbrush (*Purshia tridentata*), white snowberry (*Symphoricarpos albus*), and Prolonged drought, beetle kill and exotic invasion are rapidly changing the dynamics of this system.

29% (6,685 Acres)

Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Montane Douglas-fir Forest and Woodland

In Montana, this ecological system occurs on the east side of the Continental Divide, north to about the McDonald Pass area, and along the Rocky Mountain Front. This system is associated elevations. Elevations range from valley bottoms to 1,980 meters (6500 feet) in northern Montana and up to 2,286 meters (7500 feet) on warm aspects in southern Montana. It occurs on nort 500 years, and as a result, individual trees and forests can attain great age on some sites (500 to 1,500 years). In Montana, this system occurs from lower montane to lower subalpine enviro spiraea (*Spiraea betulifolia*), snowberry (*Symphoricarpos* species), creeping Oregon grape (*Mahonia repens*) and Canadian buffaloberry (*Shepherdia canadensis*). The Douglas-fir/pinegrass (Ce

13% (3,022 Acres)

Shrubland, Steppe and Savanna Systems
Sagebrush Steppe

Montane Sagebrush Steppe

This system dominates the montane and subalpine landscape of southwestern Montana from valley bottoms to subalpine ridges and is found as far north as Glacier National Park. It can also areas of gentle topography, fine soils, subsurface moisture or mesic conditions, within zones of higher precipitation and areas of snow accumulation. It occurs on all slopes and aspects, varia *viscidula*), subalpine big sagebrush (*Artemisia tridentata ssp. spiciformis*), three tip sagebrush (*Artemisia tripartita* ssp. *tripartita*) and antelope bitterbrush (*Purshia tridentata*). Little sagebrush (*A* occurrences are at montane elevations, and are associated with montane graminoids such as Idaho fescue (*Festuca idahoensis*), spike fescue (*Leucopoa kingii*), or poverty oatgrass (*Danthon viscidiflorus*). Because of the mesic site conditions, most occurrences support a diverse herbaceous undergrowth of grasses and forbs. Shrub canopy cover is extremely variable, ranging fro

8% (1,826 Acres)

Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Lodgepole Pine Forest

This forested system is widespread in upper montane to subalpine zones of the Montana Rocky Mountains, and east into island ranges of north-central Montana and the Bighorn and Beartooth meters (3,200-9000 feet). These forests occur on flats to slopes of all degrees and aspect, as well as valley bottoms. Fire is frequent, and stand-replacing fires are common. Following stand- forests, and 150-400 years in subalpine forests. They generally occur on dry to intermediate sites with a wide seasonal range of temperatures and long precipitation-free periods in summer. S rock types weathering to acidic substrates, such as granite and rhyolite. In west-central Montana ranges such the Big Belts and the Rocky Mountain Front, these forests are found on limestor and particularly slowly in high-elevation forests such as those along the Continental Divide in Montana.

4% (888 Acres)

Grassland Systems
Montane Grassland

Rocky Mountain Lower Montane, Foothill, and Valley Grassland

This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout Montana. These grasslands are floristically simila montane zone, they range from small meadows to large open parks surrounded by conifers; below the lower treeline, they occur as extensive foothill and valley grasslands. Soils are relatively shrub cover (<10%). Rough fescue (*Festuca campestris*) is dominant in the northwestern portion of the state and Idaho fescue (*Festuca idahoensis*) is dominant or co-dominant throughout the appreciable coverage (>10%) in lower elevation occurrences in western Montana and virtually always present, with relatively high coverages (>25%), on the edge of the Northwestern Great Pla conversion, noxious species invasion, fire suppression, heavy grazing and oil and gas development are major threats to this system.

3% (783 Acres)

Recently Disturbed or Modified
Insect-Killed Forest

Insect-Killed Forest

3% (815 Acres)

Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Foothill Limber Pine - Juniper Woodland

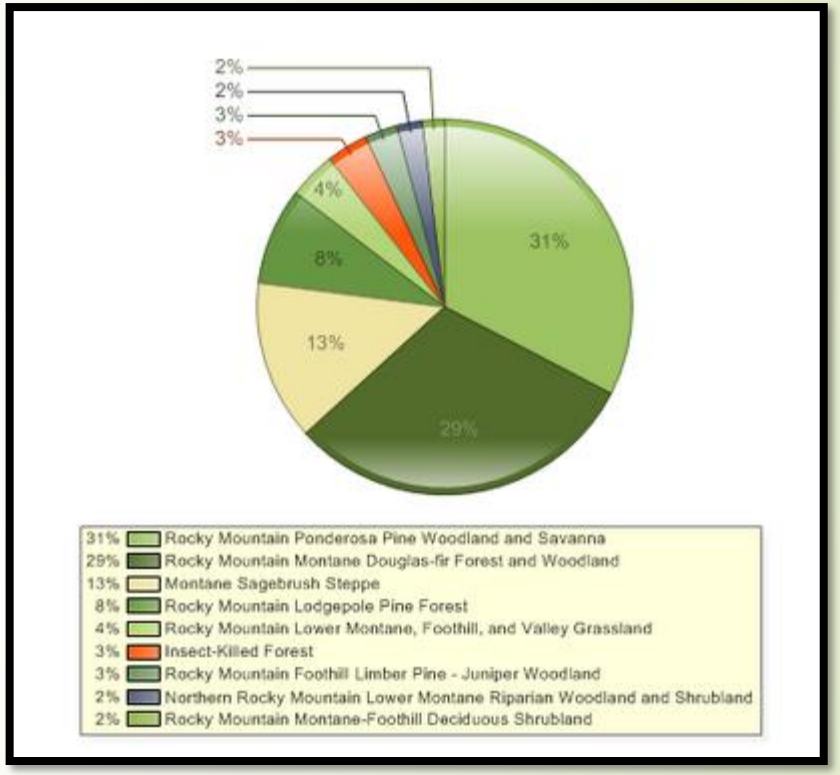
This ecological system occurs in foothill and lower montane zones in the northern Rocky Mountains and island mountain ranges of Montana and on escarpments extending out to the western G ecologically interesting examples occur along and within the mountains of the Rocky Mountain Front where it occurs most commonly on west and north facing aspects. At lower elevations, it by extreme winter weather and droughty summer conditions. It is typically dominated by limber pine (*Pinus flexilis*) or Rocky Mountain juniper (*Juniperus scopulorum*). This systemis usually fo zones or grow on exposed or severe sites within other forest systems. These juniper stands can exhibit a savanna-like character in southwestern Montana. In the system as a whole, because National Park and the Sweetgrass Hills. The climtate characteristic of these systems is marked by a relatively small amount of precipitation, with the wettest months during the growing seaso and Rocky Mountain juniper stands are found mainly on calcareous substrates. Soils have a high rock component (generally over 50% cover) and are coarse- to fine-textured, often gravelly.

2% (478 Acres)

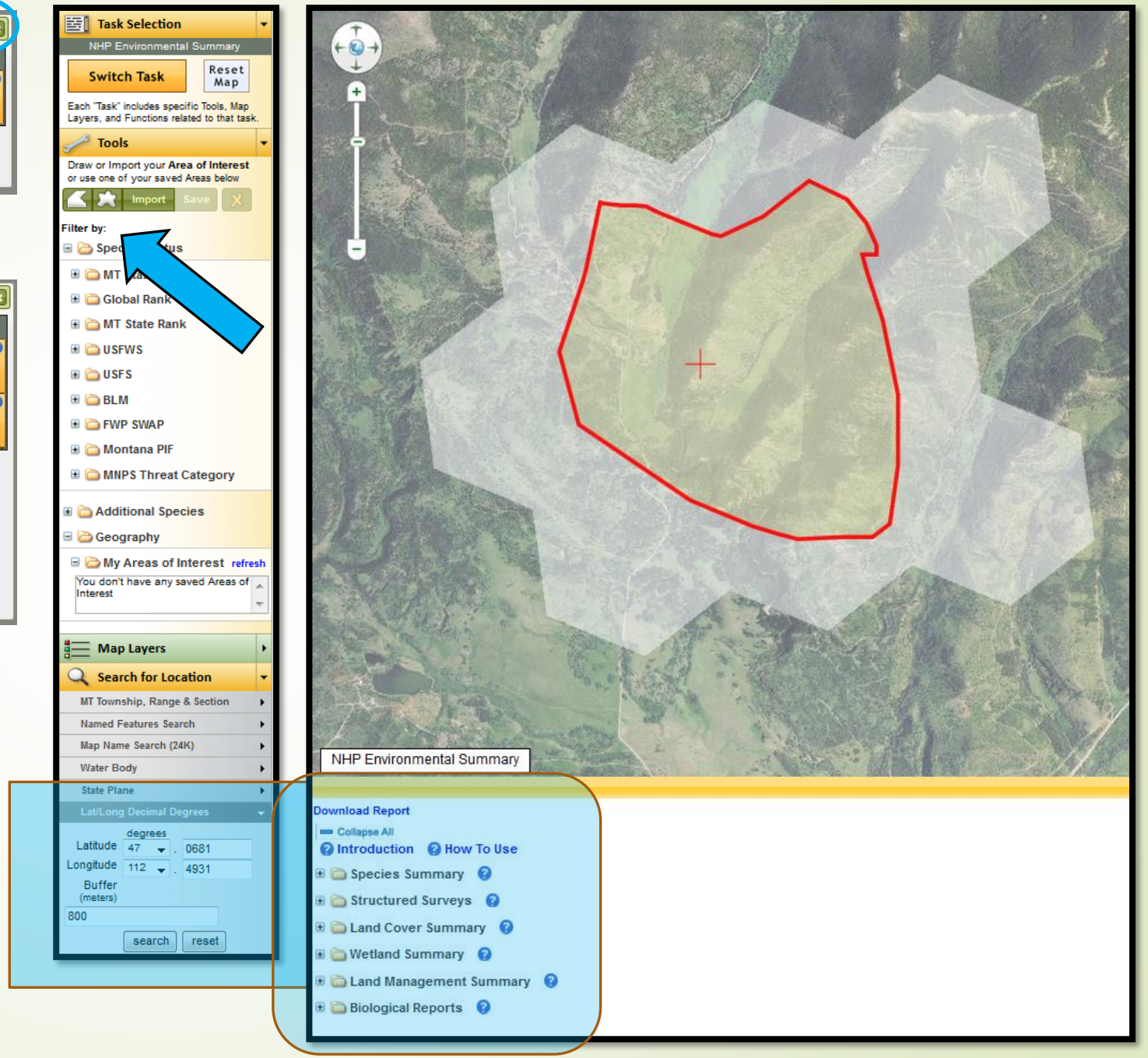
Wetland and Riparian Systems
Floodplain and Riparian

Northern Rocky Mountain Lower Montane Riparian Woodland and Shrubland

This ecological system is found throughout the Rocky Mountain and Colorado Plateau regions. In Montana, sites occur at elevations of 609-1,219 meters (2,000-4,000 feet) west of the Contin natural hydrologic regime with annual to episodic flooding, so it is usually found within the flood zone of rivers, on islands, sand or cobble bars, and along streambanks. It can form large, wide floodplains, swales and irrigation ditches. In some locations, occurrences extend into moderately high intermountain basins where the adjacent vegetation is sage steppe. Black cottonwood (*P* (*Pseudotsuga menziesii*), peachleaf willow (*Salix amygdaloides*), or Rocky Mountain juniper (*Juniperus scopulorum*). Dominant shrubs include Rocky Mountain maple (*Acer glabrum*), thinleaf alde silver buffaloberry (*Shepherdia argentea*), or snowberry (*Symphoricarpos* species).



Environmental Summary Report



Species Summary

All Species (not filtered by Status)

Detailed Species Occurrences | Detailed Point Observations Sort Order Explained

Species Occurrences

Definition of Species Occurrences

	# SO	# Obs	Predictive Model	Associated Habitat	Range
F - Westslope Cutthroat Trout *(Oncorhynchus clarkii lewisi)* SOC	2	+		Not Assigned	Y S W H
F - Bull Trout *(Salvelinus confluentus)* SOC	1	+		Not Assigned	Y S W
B - Cassin's Finch *(Haemorhous cassinii)* SOC	1	+			Y S W M
M - Canada Lynx *(Lynx canadensis)* SOC	1	+			Y S W
M - Grizzly Bear *(Ursus arctos)* SOC	1	+			Y S W H
M - Wolverine *(Gulo gulo)* SOC	1				Y S W
B - Northern Goshawk *(Accipiter gentilis)* SOC	1	+			Y S W M
B - Varied Thrush *(Ixoreus naevius)* SOC	1	+			S M
M - Fisher *(Pekania pennanti)* SOC	1				Y S W

Other Observed Species

Other Potential Species

Combined Species List

Structured Surveys

I-Mussel *(Stream Mussel Survey)* Survey Count: 1 Obs Count: Recent Survey: 2012

Land Cover Summary

Wetland Summary

Land Management Summary

9 Hexigons Selected

5,750 Acres (0.01% of Montana)

Land Management Summary *Explain*

Expand All | Collapse All

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	3,217 Acres (56%)			
Federal	2,341 Acres (41%)			
US Forest Service	2,341 Acres (41%)			
State	876 Acres (15%)			
Montana State Trust Lands	876 Acres (15%)			
Conservation Easements			396 Acres (7%)	
Private Lands or Unknown Ownership	2,137 Acres (37%)			

Biological Reports

No Biological Reports were found at this location with the filters selected.

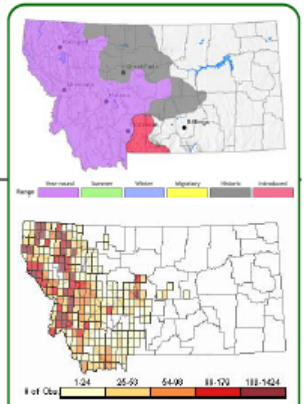
Westslope Cutthroat Trout

Oncorhynchus clarkii lewisi

Species of Concern
View in Field Guide

Global Rank: G4T4
State Rank: S2

Agency Status
USFWS:
USFS: SENSITIVE
BLM: SENSITIVE
FWP SWAP: SGCN2



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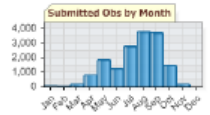

General Description

The Westslope Cutthroat Trout is one of two subspecies of native cutthroat found in the state. Together, they have been designated Montana's state fish. Cutthroat trout are so named for the red slashes near the lower jaws. The Westslope Cutthroat Trout's historical range was all of Montana west of the Continental Divide as well as the upper Missouri River drainage. This fish has been seriously reduced in its range by two primary factors: hybridization with Rainbow and/or Yellowstone Cutthroat Trout, and habitat loss and degradation. Since the Westslope is recognized as a very important part of our native fish fauna it has been designated a Montana Fish of Special Concern in Montana. Pure Westslope Cutthroat Trout have been identified by genetic analysis and form the broodstock maintained by the Montana Department of Fish, Wildlife, and Parks at its Anaconda hatchery. The average size of these fish is 6 to 16 inches, depending on habitat, but they rarely exceed 18 inches in length.

Westslope Cutthroat Trout are common in both headwaters lake and stream environments. They feed primarily on aquatic insect life and zooplankton. Cutthroat spawn in the spring in running water, burying their eggs in a nest called a redd. The eggs hatch in a few weeks to a couple of months. The newborn fry frequently migrate back to lakes to rear after 1 to 2 years in their native stream. Westslope Cutthroat Trout is a trout with small, non-rounded spots, with few spots on the anterior body below the lateral line. Coloration varies, but generally is silver with yellowish hints, though bright yellow, orange, and especially red colors can be expressed to a much greater extent than on coastal or Yellowstone Cutthroat Trout (Behnke 1992). Hybridization between Westslope and Yellowstone Cutthroat Trout can produce a spectrum of spotting and coloration ranging between the typical patterns of each subspecies. Some populations that have been affected by hybridization show little or no phenotypic signs of hybridization (Behnke 1992). Hybridization with Rainbow Trout can be detected by the appearance of spots on the top of the head and on the anterior body below the lateral line, as well as by reduced scale counts, increased caecal counts, and loss of basibranchial teeth (Behnke 1992).

Habitat

Spawning and rearing streams tend to be cold and nutrient poor. Westslope Cutthroat Trout seek out gravel substrate in riffles and pool crests for spawning habitat. Cutthroat trout have long been regarded as sensitive to fine sediment (generally defined as 6.3 millimeters or less). Although studies have documented negative survival as fine sediment increases (Weaver and Fraley 1991), it is difficult to predict their response in the wild (McIntyre and Rieman 1995). This is due to the complexity of stream environments and the ability of fish to adapt somewhat to changes in micro-habitat (Everest et al. 1987, Montana AFS Species Status Account).

Westslope Cutthroat Trout also require cold water, although it has proven elusive to define exact temperature requirements or tolerances. Likewise, cutthroat trout tend to thrive in streams with more pool habitat and cover than uniform, simple habitat (Shepard et al. 1984). Juvenile cutthroat trout overwinter in the interstitial spaces of large stream substrate. Adult cutthroat trout need deep, slow moving pools that do not fill with anchor ice in order to survive the winter (Brown and Mackay 1995, Montana AFS Species Status Account).

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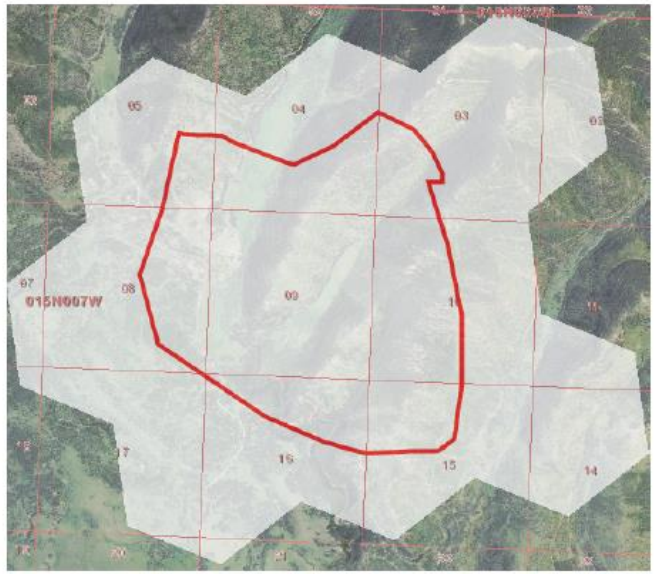
Environmental Summary

MONTANA
Natural Heritage Program

1515 East 6th Avenue
Helena, MT 59620
(406) 444-0241
mtnhp.org

Latitude Longitude
47.04261 -112.44603
47.09368 -112.52622



Suggested Citation
Montana Natural Heritage Program. Environmental Summary Report.
for Latitude 47.04261 to 47.09368 and Longitude -112.44603 to -112.52622. Retrieved on 10/16/2017.

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The Montana Natural Heritage Program is part of NatureServe – a network of over 80 similar programs in states, provinces and nations throughout the Western Hemisphere, working to provide comprehensive status and distribution information for species and ecosystems.

Montana Natural Heritage Program · Montana State Library · University of Montana · NatureServe

Species Occurrences

	# SO	# Obs	Predictive Model	Associated Habitat	Range
F - Westslope Cutthroat Trout *(Oncorhynchus clarkii lewisi)* SOC	2	+		Not Assigned	

View in Field Guide | View Predicted Models | View Range Maps

Species of Concern Global: G4T4 State: S2 USFS: Sensitive - Known on Forests (BD, BRT, CG, FLAT, HLC, KOOT, LOLO) BLM: SENSITIVE
FWP SWAP: SGCN2

Delineation Criteria - Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to
Importanc
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Predictive

F - Bull Trou
View in Fie
Species of
BLM: SPEC
Delineati
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Predictive

B - Cassin's

22% (*1,291 Acres*)

Forest and Woodland Systems
Conifer-dominated forest and woodland (xeric-mesic)

Rocky Mountain Montane Douglas-fir Forest and Woodland

In Montana, this ecological system occurs on the east side of the Continental Divide, north to about the McDonald Pass area, and along the Rocky Mountain Front. This system is associated with a dry to submesic continental climate regime with annual precipitation ranging from 51 to 102 centimeters (20-40 inches), with a maximum in winter or late spring. Winter snowpacks typically melt off in early spring at lower elevations. Elevations range from valley bottoms to 1,980 meters (6500 feet) in northern Montana and up to 2,286 meters (7500 feet) on warm aspects in southern Montana. It occurs on north-facing aspects in most areas, and south-facing aspects at higher elevations. This is a Douglas-fir

Wetland and Riparian Mapping

Explain

		Acres	
Palustrine			
PAB	Aquatic Bed	6	Wetlands with vegetation growing on or below the water surface for most of the growing season.
PUS	Unconsolidated Shore	<1	Wetlands with less than 75% areal cover of stones, boulders, or bedrock. AND with less than 30% vegetative cover AND the wetland is irregularly exposed due to seasonal or irregular flooding and subsequent drying.
PEM	Emergent	124	Wetlands with erect, rooted herbaceous vegetation present during most of the growing
PSS			
PFO			
Riverine			
Upper			
R3U			
R3U			

Land Management Summary

Explain

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	3,217 Acres (56%)			
Federal	2,341 Acres (41%)			
US Forest Service	2,341 Acres (41%)			
USFS Owned	2,341 Acres (41%)			
USFS Ranger Districts				2,425 Acres
Helena-Lewis & Clark National Forest, Lincoln Ranger District				2,425 Acres
USFS National Forest Boundaries				2,425 Acres
Helena-Lewis & Clark National Forest				2,425 Acres
State	876 Acres (15%)			
Montana State Trust Lands	876 Acres (15%)			
MT State Trust Owned	876 Acres (15%)			
Conservation Easements			396 Acres (7%)	
Private			396 Acres (7%)	
Five Valleys Land Trust			396 Acres (7%)	
Private Lands or Unknown Ownership	2,137 Acres (37%)			

Suggested Contacts for Natural Resource Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of planning processes and management decisions. In addition to the information you receive from us, we encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located. They may have additional data or management guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high profile management species and to use the U.S. Fish and Wildlife
regarding U.S. E

For your conven

Montana Fish, W

Fish Species	
American Biso Black-footed F Black-tailed Pr Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Lauri Hanauska-Brown LHanauska-Brown@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	John Vore jvore@mt.gov (406) 444-5209
Managed Terrestrial Game and Nongame Animal Data	Adam Messer – MFWP Data Analyst amesser@mt.gov (406) 444-0095
Fisheries Data	Bill Daigle – MFWP Fish Data Manager bdaigle@mt.gov (406) 444-3737
Wildlife and Fisheries Scientific Collector's Permits	http://fwp.mt.gov/doingBusiness/licenses/scientificWildlife/ Merissa Hayes for Wildlife merhayes@mt.gov (406) 444-7321 Beth Giddings for Fisheries begiddings@mt.gov (406) 444-7319
Fish and Wildlife Recommendations for Subdivision Development	Renee Lemon RLemon@mt.gov (406) 444-3738 and see http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/buildingWithWildlife/subdivisionRecommendations/
Regional Contacts	Region 1 (Kalispell) (406) 752-5501 Region 2 (Missoula) (406) 542-5500 Region 3 (Bozeman) (406) 994-4042 Region 4 (Great Falls) (406) 454-5840 Region 5 (Billings) (406) 247-2940 Region 6 (Glasgow) (406) 228-3700 Region 7 (Miles City) (406) 234-0900

Montana Natural Heritage Program. Environmental Summary Export

for Latitude 47.04261 to 47.09368 and Longitude -112.44603 to -112.52622. Retrieved on 10/16/2017.

Please refer to the accompanying PDF document for information about the data summaries in this workbook.

Note: For the species summaries, the PDF shows only "Documented" species, while this workbook also includes "Potential" species (see the "Documented" column).

TitlePage | Species Occ | Other Obs | Potential Species | Structured Surveys | Land Cover | Wetland Summary | Wetland Special Modifiers | Land Management

MT Stat	Species Gro	Sort Or	Docu	ELCODE	Common Name	Scientific Name	Pct	Distribution	SO Count	OBS Cour	Has I	Models	Model N Pc	Model O Pc	Model M P	Model L Pc	Model I Pct	Habitat Cor	Habitat Occ	Ranges	Global Rank	MT State Ra
SOC	Fish	5	Occ	AFCHA02088	Westslope Cutthroat Trou	Oncorhynchus clarkii lewisi	Mountain	Resident Year Round	2		Y	N	56							YSWH	G4T4	S2
SOC	Fish	5	Occ	AFCHA05020	Bull Trout	Salvelinus confluentus	Mountain	Resident Year Round	1		Y	N	33							YSW	G4	S2
SOC	Birds	2	Occ	ABPBY04030	Cassin's Finch	Haemorhous cassinii	Drier coni	Resident Year Round	1		Y	M			100			50		YSWM	G5	S3
SOC	Mammals	1	Occ	AMAJH03010	Canada Lynx	Lynx canadensis	Subalpine	Resident Year Round	1		Y	ML			89	11		61	6	YSW	G5	S3
SOC	Mammals	1	Occ	AMAJB01020	Grizzly Bear	Ursus arctos	Conifer fo	Resident Year Round	1		Y	ML			67	33		73	26	YSWH	G4	S2S3
SOC	Mammals	1	Occ	AMAJF03010	Wolverine	Gulo gulo	Boreal For	Resident Year Round	1			ML			22	78		43	24	YSW	G4	S3
SOC	Birds	2	Occ	ABNKC12060	Northern Goshawk	Accipiter gentilis	Mixed cor	Resident Year Round	1		Y	L				100		38	13	YSWM	G5	S3
SOC	Birds	2	Occ	ABPBJ22010	Varied Thrush	Ixoreus naevius	Moist con	Migratory Summer Br	1		Y	L				89		50	1	SM	G5	S3B
SOC	Mammals	1	Occ	AMAJF01020	Fisher	Pekania pennanti	Mixed cor	Resident Year Round	1			L				22		23	31	YSW	G5	S3

Level 3	Acres	Land Cover Description
Rocky Mountain Montane Douglas-fir Forest and Wo	1291.2	In Montana, this ecological system occurs on the east side of the Continental Divide, north to about the McDonald Pass area, and along the Ro
Montane Sagebrush Steppe	1076.8	This system dominates the montane and subalpine landscape of southwestern Montana from valley bottoms to subalpine ridges and is found
Northern Rocky Mountain Lower Montane Riparian W	675.4	This ecological system is found throughout the Rocky Mountain and Colorado Plateau regions. In Montana, sites occur at elevations of 609-1,2
Harvested forest-tree regeneration	431.4	Land cover has been modified by logging. New growth is primarily trees.
Harvested forest-grass regeneration	424.3	Land cover has been modified by logging. New growth is primarily herbaceous species.
Harvested forest-shrub regeneration	330.7	Land cover has been modified by logging. New growth is primarily shrubs.
Rocky Mountain Lodgepole Pine Forest	277.5	This forested system is widespread in upper montane to subalpine zones of the Montana Rocky Mountains, and east into island ranges of nor
Rocky Mountain Subalpine-Upper Montane Grasslan	262.9	These lush grassland systems are found in upper montane to subalpine, high-elevation,zones, and are shaped by short summers, cold winter
Rocky Mountain Ponderosa Pine Woodland and Sav	246.9	This system occurs on warm, dry, exposed sites in the foothills of the Rocky Mountains in west-central and central Montana, at the ecotone b
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir For	227.3	Engelmann spruce (Picea engelmannii) and subalpine fir (Abies lasiocarpa) make up a substantial part of the mont
Rocky Mountain Subalpine Deciduous Shrubland	158.3	This shrubland ecological system is found within the zone of continuous forest in the upper montane and lower subalpine zones along both s
Rocky Mountain Subalpine-Montane Mesic Meadow	79.8	This system is restricted to sites from lower montane to subalpine elevations where finely textured soils, snow deposition, or windswept co
Rocky Mountain Subalpine Mesic Spruce-Fir Forest	60.9	These forests are similar to Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland (4242), but occur in locations with cold-air
Other Roads	49.8	County, city and or rural roads generally open to motor vehicles.
Rocky Mountain Dry-Mesic Montane Mixed Conifer F	37.8	This ecological system, composed of highly variable montane conifer forests, is found throughout Montana. It is associated with a submesic
Alpine-Montane Wet Meadow	33.8	These moderate-to-high-elevation systems are found throughout the Rocky Mountains, dominated by herbaceous species found on wetter s
Rocky Mountain Subalpine Woodland and Parkland	25.4	This system includes all subalpine and treeline forest associations of the Montana Rocky Mountains and island ranges. It is characteristically
Aspen Forest and Woodland	20.7	This widespread ecological system is more common in the southern and central Rocky Mountains, but occurs in the montane and subalpine z
Insect-Killed Forest	20.5	
Rocky Mountain Lower Montane, Foothill, and Valley	16.2	This grassland system of the northern Rocky Mountains is found at lower montane to foothill elevations in mountains and valleys throughout
Emergent Marsh	3.8	This widespread wetland system occurs throughout the arid and semi-arid regions of North America. In Montana, this system is typically four
Rocky Mountain Subalpine-Montane Fen	0.4	Fens occur infrequently throughout the Rocky Mountains from Colorado north into Canada. They are confined to specific environments defin
Rocky Mountain Cliff, Canyon and Massive Bedrock	0.2	This ecological system of barren and sparsely vegetated landscapes is found from foothill to subalpine elevations throughout the Rocky Mou
Rocky Mountain Conifer Swamp	0.2	In northwestern Montana, conifer swamps occur from 865 to 1485 meters (2,838-5,200 feet). This is a minor system with infrequent occurren

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MTNHP_EnviroSum_2017-10-16_11...	Adobe Acrobat Document	4,351 KB	No	4,580 KB	5%	10/16/2017 11:35 AM

Application: 62314 - 2018 Local Cooperative- New Test Application

Program Area: AGR Noxious Weed Trust Fund

Funding Opportunities: 60497 - AGR Noxious Weed Trust Fund 2018 Local Cooperative- New

Application Deadline: 01/06/2018

Instructions

The required application forms appear below. Please note: Clicking "Mark as Complete" does not submit the application component or prevent further editing. The check mark beside the form is only an indicator that the form has been completed. All application components must be marked as complete in order to submit. To submit the application click the Submit button.

Application Forms — Application Details | Submit | Withdraw

Form Name	Complete?	Last Edited
General Information	✓	10/13/2017
Project Information		
Cooperators		
Herbicide Worksheet		
Revegetation Worksheet		
Budget		
Project Overview - Local Coop		
Objectives & IWM Plan		
Activities/Education Timeline		
EA- General Vegetation		
EA-Soils		
EA- Surface and Groundwater		
EA- Fish and Wildlife Habitat		
EA- Threatended, Endangered or Sensitive Species		
EA- Air Quality		
EA- Historical and Archaeological Sites		
Other Attachments		

All EA Forms

- Checklist
  - Complete each line in the checklist
  - Choose which level of impact is most likely for each line
  - Think critically about the questions: Weed control efforts do have impacts on the environment, but not all impacts are bad and most can be mitigated easily.
  - Choose Yes, No, or N/A depending on mitigation needs

- Mitigation
  - Complete the mitigation section based on the answers in the checklist; even if the answer is "No Mitigation Necessary".
  - These should be specific statements, and may need to include application methods and information from herbicide labels.

General Vegetation

Instructions

*Complete the table. Answer each question regarding the severity of impact from the proposed project activities (choose one level of impact for each question). Answer if mitigation is possible (if no impact is anticipated, answer NA). Describe mitigation strategies for any minor or potentially significant impacts. *Remember, not all impacts are negative. Most weed control efforts have positive impacts on native plant communities.*

When done click "Save". If changes are needed click "Edit". Click "Mark as Complete" when finished with form.

**Required: Upload the Environmental Summary Report to "Other Attachments".*

Impact/Risk

*This section should **address potential damage to non-target vegetation in the project area.** Plant community type and plant species information can be found using the Montana Natural Heritage Program (MNHP) Map Viewer or the Environmental Summary Report. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".*

Will any proposed project actvities result in:	None	Minor	Potentially Significant	Can it be mitigated?
a. Changes to the diversity, productivity or abundance of plant species (including trees, shrubs, forbs and grasses)?	☐	☐	☐	Yes
b. Adverse effects on any non-target plants?	☐	☐	☐	Yes
c. Any other likely impacts not addressed above?	☐	☐	☐	Yes

Mitigation

1a. Describe mitigation strategies:*

10,000 character max

1b. Describe mitigation strategies:*

10,000 character max

1c. List vulnerable plant species and describe mitigation strategies:*

10,000 character max

1d. List any additional impacts and describe mitigation strategies:*

10,000 character max

Remember to use MS Word, then copy and paste in each field.

Wildlife Habitat & TES Species

Instructions

*Complete the table. Answer each question regarding the severity of impact from the proposed project activities (choose one level of impact for each question). Answer if mitigation is possible (if no impact is anticipated, answer NA). Describe mitigation strategies for any minor or potentially significant impacts. *Remember, not all impacts are negative. Most weed control efforts have positive impacts on native plant communities which can enhance wildlife habitat.*

When done click "Save". If changes are needed click "Edit". Click "Mark as Complete" when finished with form.

**Required: Upload the Environmental Summary Report to "Other Attachments".*

Impact/Risk (Fish & Wildlife Habitat)

Mark as Complete | Go to Application Forms

*This section should **address the potential for effects from weed control actions on fish and wildlife habitat** in the project area. Use the Montana Heritage Program Field Guide or Environmental Summary Report to find species and habitat information, or contact your local Fish, Wildlife and Parks biologist. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".*

*•**If your project includes grazing**, consult with a local Fish, Wildlife and Parks specialist. Describe how the project will address potential issues with bighorn sheep, grizzly bears, wolves and other predators.*

Will any proposed project activities result in:	None	Minor	Potentially Significant	Can it be mitigated?
a. Alterations of critical fish or wildlife habitat?				
b. Changes in the diversity or abundance of game animals or bird species?				
c. Changes in the diversity or abundance of non-game species?				
d. Targeted grazing in areas associated with bighorn sheep or predators?				
4e. Any other likely impacts not addressed above?				

Impact/Risk (TES Species)

*This section should **address effects on species listed under the Federal Endangered Species Act (ESA) or species listed as sensitive** by the Montana Natural Heritage Program (NHP) in the project area. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".*

Will any proposed project activities result in:	None	Minor	Potentially Significant	Can it be mitigated?
a. Alterations of critical habitat for TES species?				
b. Adverse effects on any TES species?				
c. Any other likely impacts not addressed above?				

Mitigation

Fish and Wildlife Habitat, and TES Species: Describe mitigation strategies for any minor or potentially significant impacts, as well as any additional impacts not addressed in the tables:*

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Soils and Water Brett

Soils & Water

Instructions

Complete the table for the project site description and the active ingredients being used. Describe mitigation strategies for any potential impact or risk from your list of active ingredients on the project site below. When done click "Save". If changes are needed click "Edit". Click "Mark as Complete" when finished with form.

**Required: Upload soil data maps, surface water map, well map, and well log report to "Other Attachments".*

Soils, and Ground & Surface Water

Mark as Complete | Go to Application Forms

*This section should **address the types of soils in the project area susceptible to unwanted impacts of herbicide application and potential impacts to water in the project area** based on maps and label statements.*

*•**Create soil data maps** using Web Soil Survey or through the local NRCS office. Maps must include: Soil Map; Soil Chemical Properties (pH: 1 to 1 Water); Soil Physical Properties (Saturated Hydraulic Conductivity: Ksat); Soil Erosion Factors (K Factor and Whole Soil); Soil Erosion Factors (Wind Erodibility Group); and Water Features (Depth to Water Table). If the project is too large to read soil labels on the map, separate the project into several sections and create a map for each area.*

*•**Create a surface water map** with any legible map source such as google earth, Montana Geographic Information Clearinghouse, paper topographical maps, etc. Maps must clearly label all surface water features by name within the project area and adjacent to herbicide application areas. Indicate unnamed features as "unnamed pond #1", or "unnamed stream #2".*

*•**Create a well location map and well log** through the Montana Geographic Information Clearinghouse (must use google chrome). Maps must clearly label all wells less than 50 feet in depth within the project area boundary.*

Attach the soil map, surface water map, well location map, and well log report to the "Other Attachments" form. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".

**For public water supplies (PWS), each PWS has a Well Control Zone associated with its permitting. Well Control Zones have special restrictions about the storage and usage of hazardous materials (including pesticides). In Montana, Control Zones typically consist of a 100 foot radius exclusion zone. When in doubt contact the Montana Department of Environmental Quality.*

***Read the labels of the products you are planning to use thoroughly**. Address any label statements that indicate potential impacts related to soil properties or surface and groundwater.*

*Complete the table below and describe mitigation efforts by **listing advisory and mandatory statements from herbicide labels regarding soils, and surface and ground water for the active ingredients you will be using**. Examples include "the use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination", "high potential for runoff", etc. Other chemical properties including half-life can be found at the **EPA's Pesticide Chemical Search.***

Upload Soil Maps

- Soil Map: Soil Types With Descriptions
- Soil Qualities and Features: Soil Drainage Class (Saturated Whole Soil Ksat) (Leaching)
- Water Features: Depth to Water Table (Leaching)
- Soil Erosion Factors: K Factor (Kw) (Runoff)
- Soil Erosion Factors: Soil Wind Erodibility Group (WEG) (Post Application Drift)
- Soil Chemical Properties: Soil pH (If any herbicide label contains limitations in regards to soil pH) (Chemical Inhibitors)

Upload Surface Water & Well Maps

Surface Water Map: With any legible map source such as google earth, Montana Geographic Information Clearinghouse, paper topographical maps, etc.

- Maps must clearly label all surface water features by name within the project area and adjacent to herbicide application areas.
- Indicate unnamed features as “unnamed pond #1”, or “unnamed stream #2”.

Create a well location map and well log through the Montana Geographic Information Clearinghouse (must use google chrome).

- Maps must clearly label all wells less than 50 feet in depth within the project area boundary.

Review Your Information

Review your maps and identify areas of vulnerability. Ask, will the application of a product increase the chances of the following conditions to occur

Carefully read your product labels for appropriate use and application .

- Large areas of steep slopes with fine or gravely soils could be potentially significant vulnerabilities to soil instability, erosion, or compaction.
- Likewise, areas of drainage, confluence, and ponding could be potentially significant vulnerabilities to leaching of herbicides through the soil profile.
- Any other impacts may be fire damage, ash layers, monocultures (Knapweed) whose treatment may effect soil stability, flooding, recent construction, ect.
- Any water that is ponding on the surface, or wetland environment, is considered surface water
- Spraying herbicides on or near surface waters can kill aquatic vegetation and small invertebrates, leading to an increase of CO2 in the water which can suffocate and kill larger aquatic species.
- Soils vulnerable to leaching or runoff near water bodies are potential hazards for surface water contamination.
- Soils vulnerable to leaching, or with shallow water tables are vulnerable to groundwater contamination

Complete Potential Risk Assessment

- List every Active Ingredient that will be applied in tank mixes or as a single chemical. Each active ingredient only needs to be listed once, but consider all application locations for your mitigation strategies.
- Check each Environmental Hazard box that applies to the listed active ingredient. This information can be found on the Product Label

Potential Risk

Add

Click "Add" to enter project herbicides. Click "Save" when complete. List all active ingredients (AI) you will be using in your project, and choose all potential hazards associate with each AI (reference herbicide labels). List tank mix ingredients separately.

Active Ingredients	Runoff	Leaching	Drift	Toxic to Aquatic Life	Surface Water Restrictions

Potential Risk

Click "Add" to enter project herbicides. Click "Save" when complete. List all active ingredients (AI) you will be using in your project, and choose all potential hazards associate with each AI (reference herbicide labels). List tank mix ingredients separately

If you do not see a desired active ingredient in the list, please contact MT Dept of Agriculture Noxious Weeds Trust Fund staff for clarification and resolution.

Active Ingredients

Runoff ☐

Leaching ☐

Drift ☐

Toxic to Aquatic Life ☐

Surface Water Restrictions ☐

Complete Project Description Table

- Review your Project Site Maps and check the boxes which apply to location sensitivities that are present in your project area.

Public Water Supplies:

- Every PWS has a Well Control Zone associated with its permitting. Well Control Zones have special restrictions about the storage and usage of hazardous materials (including pesticides). In Montana, Control Zones typically consist of a 100 foot radius exclusion zone. When in doubt contact the Montana Department of Environmental Quality.

Mitigation

- Read and site your product labels.
- Describe the areas vulnerable to the nature of that product and how you plan to mitigate negative impacts of product usage.

Project Description

Click "Edit" at the top to complete the table and mitigation sections. Reference your soil and water maps, then choose all that apply in the table below. Soil erosion (ex. steep slopes, powdery dry soils), soil compaction (ex. heavy agriculture use), shallow groundwater (<200ft), surface water (even ponds), and wells (shallow and deep).

Does the proposed project contain:	Soil Erosion	Soil Compaction	Shallow Groundwater	Surface Water	Wells
Project Site Description:	☐	☐	☐	☐	☐

Mitigation

Soils and Water: Describe mitigation strategies (use herbicide labels) for any minor and potentially significant impacts, as well as any additional impacts not addressed in the tables:*

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Soils & Water (More Info)

- Review The Noxious Weed Trust Fund EA Soils, Ground & Surface Water completion guide at: http://montana.maps.arcgis.com/apps/MapSeries/index.html?appid=a47893aa6c89487e8a5e30da728f8dce

Air Quality

Instructions

Complete the table. Answer each question regarding the severity of impact from the proposed project activities (choose one level of impact for each question). Answer if mitigation is possible (if no impact is anticipated, answer NA). Describe mitigation strategies for any minor or potentially significant impacts. ***List advisory and mandatory statements from each herbicide label regarding air quality and drift****. Examples include "do not apply at wind speeds over 10 mph", "boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter", "do not apply with a nozzle height greater than 4 feet above crop canopy", etc.*

When done click "Save". If changes are needed, click "Edit". Click "Mark as Complete" when finished with form.

**Required: Upload the Environmental Summary Report to "Other Attachments".*

Impact/Risk

This section should ***address the impact to air quality in the project area****. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".*

Will any proposed project activities result in:	None	Minor	Potentially Significant	Can it be mitigated?
a. Emission of air pollutants or deterioration of ambient air quality?	☐	☐	☐	Yes
b. Creation of objectionable odors?	☐	☐	☐	Yes
c. Adverse effects on non-target plants due to drift?	☐	☐	☐	Yes
d. Any other likely impacts not addressed above?	☐	☐	☐	Yes

Mitigation

Describe mitigation strategies for any minor or potentially significant impacts, as well as any additional impacts not addressed in the table.*

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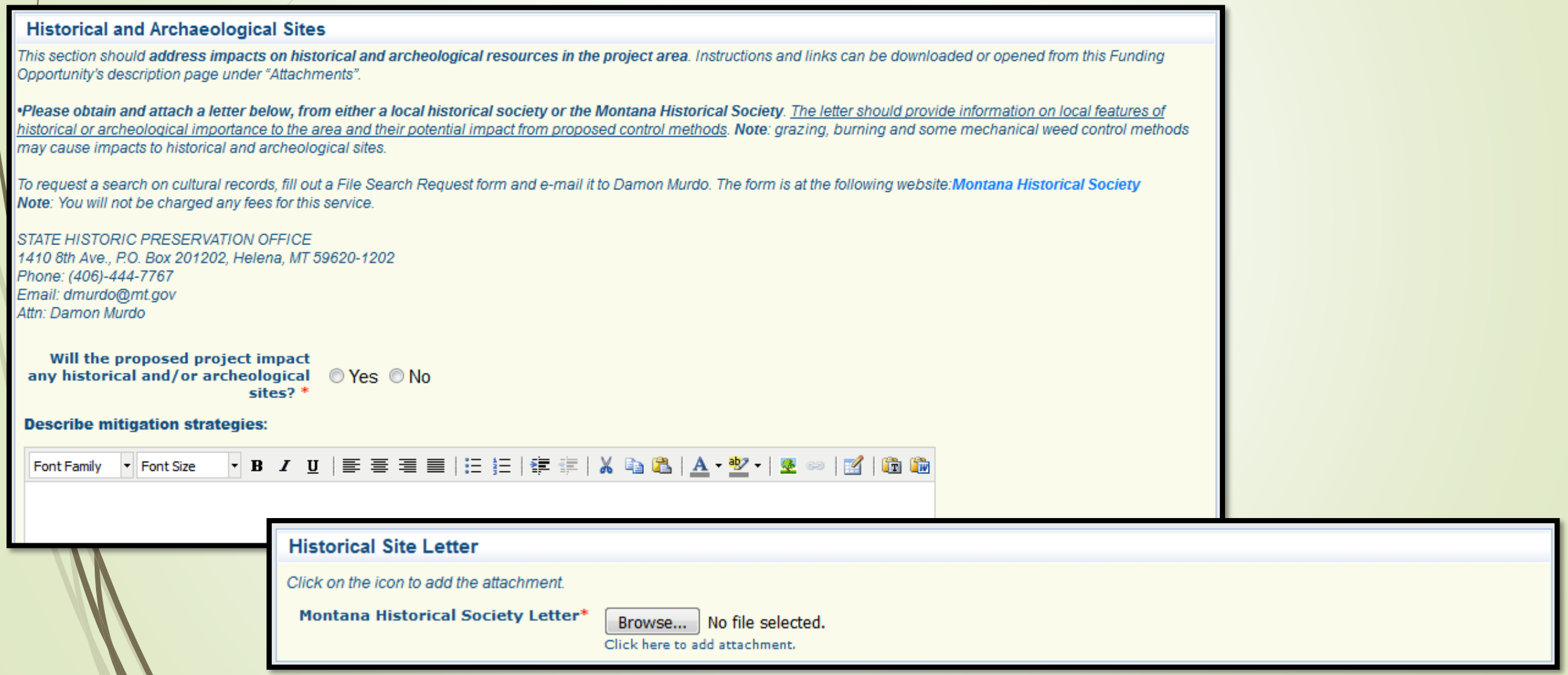
Historical and Archaeological Sites



Historical and Archaeological Sites

*This section should **address impacts on historical and archeological resources in the project area**. Instructions and links can be downloaded or opened from this Funding Opportunity's description page under "Attachments".*

*•**Please obtain and attach a letter below, from either a local historical society or the Montana Historical Society**. The letter should provide information on local features of historical or archeological importance to the area and their potential impact from proposed control methods. **Note**: grazing, burning and some mechanical weed control methods may cause impacts to historical and archeological sites.*

*To request a search on cultural records, fill out a File Search Request form and e-mail it to Damon Murdo. The form is at the following website:**Montana Historical Society***
***Note**: You will not be charged any fees for this service.*

STATE HISTORIC PRESERVATION OFFICE
1410 8th Ave., P.O. Box 201202, Helena, MT 59620-1202
Phone: (406)-444-7767
Email: dmurdo@mt.gov
Attn: Damon Murdo

Will the proposed project impact any historical and/or archeological sites? * ○ Yes ○ No

Describe mitigation strategies:

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Historical Site Letter

Click on the icon to add the attachment.

Montana Historical Society Letter* Browse... No file selected.

Click here to add attachment.

EA Document Checklist

Instructions

Please complete the checklist below. All documents listed must be uploaded to "Other Attachments" or specific forms before submitting the application.

When done click "Save". If changes are needed click "Edit". Click "Mark as Complete" when finished with form.

Document Checklist

Required Documents	
Project Map (Project Overview Form)	☐
EA Summary Report (zip or both PDF & EXCEL files)	☐
Soil Maps (Ksat, KFactor, Wind Erodibility Group, pH, Depth to Water Table)	☐
Surface Water Map (all water bodies labeled)	☐
Well Map (indicate all shallow wells)	☐
Well Log (list of all shallow wells)	☐
Letter from the Montana Historical Society or Cultural Records office	☐
Photo(s) of the problem (optional)	☐

Environmental Assessments Contacts

- **GENERAL VEGETATION TYPE**
- **WILDLIFE HABITAT & TES SPECIES**
- **AIR QUALITY**
- **HISTORICAL & ARCHEOLOGICAL SITES**

GRETA DIGE
444-7882
great.dige@mt.gov

- **SOILS & WATER**

BRETT HEITSHUSEN
Email: BHeitshusen@mt.gov
444-3271
John Peterson
Email: John.Peterson@mt.gov
444-5422